

Remarks/Arguments

Claims

Prior to this Reply, claims 1-21 were pending. No claims have been amended or cancelled. Following entry of this Reply and Amendment, claims 1-21 will be pending

Response to Detailed Action

Claim Rejections – 35 U.S.C. § 103(a)

Regarding paragraphs 1 and 2 of the detailed action, claims 1-21 stand rejected under 35 U.S.C. § 103(a) over Shichiri (U.S. Patent 6,387,516) in view of Cartier (U.S. Patent 4,952,457) and Lavin (U.S. Patent 3,271,235).

The Office Action rejects the claims as filed over the cited art references, because, allegedly, the cited art references teach a “synergistic mixture of alkali metal salts and alkaline earth metal salts.” Applicants respectfully disagree that such a “synergistic mixture” is taught in the combined prior art references with regard to the cited salts. Even if such an interpretation of the prior art is adopted *ad arguendo*, however, the current rejections are improper because the claims are not directed to *any* alkali salts and *any* alkaline earth salts in *any* combination.

Specifically, the specification of the present invention is directed toward the use of surprisingly high levels of sodium acetate, in whole or in part in place of potassium acetate, in combination with a magnesium salt. It is this specific combination to which the specification and claims of the present invention are directed, and not simply to the generic combination of two broad classes of salts. The “detailed description”, in the second paragraph, elucidates the desirability of sodium acetate use:

Further, increased amounts of sodium acetate can be used to replace, in whole or in significant part, the conventional potassium acetate component of many laminated glass interlayers. These results are especially desirable in polymer interlayers that also contain magnesium salt adhesion control agents, because, conventionally, the amount of potassium acetate that could be used to produce a product with a given set of specifications was dependent in part upon the amount of magnesium salt that was used. As described herein throughout, the present invention provides embodiments in which sodium acetate is used to eliminate or reduce the amount of potassium acetate while

not concurrently requiring a decrease in magnesium salt, and, in some embodiments, allowing an increase in magnesium salt.

The specification makes clear that potassium acetate and sodium acetate are not perfectly interchangeable, and the distinction between the two is reflected in the claims, which call for a relatively high level of sodium acetate in combination with a magnesium salt.

Whatever else the three prior art references teach, they certainly do not teach the use of an elevated level of sodium acetate in addition to a magnesium salt, or the specific ratios of the various components as claimed. Each, in fact, specifically teaches away from the use of sodium acetate in significant amounts:

Shichiri does not disclose or suggest the claimed invention. Although Shichiri mentions sodium acetate, the basic teaching of Shichiri is that the amount of sodium, as well as the average sodium salt particle size, must be kept to a minimum. The amount of sodium, in fact, is taught by Shichiri to preferably be no more than 50 ppm and more preferably no more than 15 ppm (column 7, line 7 et seq.). It is then taught that at sodium levels above 50 ppm, "blushing may become prominent" (ibid). A sodium concentration of less than 50 ppm in a polymer sheet does not teach or suggest a titer attributable to sodium acetate of at least 20, as required by claims 1, 20, and 21. Further, Shichiri does not teach or suggest the potassium acetate to sodium acetate ratios in claim 10. Consequently, not only does Shichiri not provide the required elements of the claims, *it teaches away from the claims*.

Cartier also does not disclose or suggest the claimed invention. Cartier not only does not suggest the claimed invention, in fact, it strongly teaches away from combining a significant portion of sodium acetate and a magnesium salt:

Consequently, the most preferred formulations minimize or totally eliminate monovalent metal salts and use only divalent metal salts More specifically, in using these most preferred salts, a very low level of KOAc or other monovalent salt is used to provide a titer . . . of 0 to about 5 . . . (column 5, line 42 et seq).

This clearly not only does not suggest using sodium acetate (a monovalent metal salt), it in fact suggests that you avoid its use! Cartier teaches away from the claims.

Lavin does not disclose or suggest the claimed invention. Lavin, much like the prior two art references, makes clear that sodium acetate is to be avoided. Lavin, in fact, instructs that all sodium alkyl carboxylate that is residual in the sheet after formation should be removed to allow for the introduction of the potassium salts of Lavin's invention (column 7, line 52 et seq). Lavin, as well, teaches away from the claims.

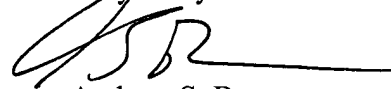
The three references teach away from the claimed invention and do not disclose the individual elements of the claims, and, accordingly, it would not have been obvious to combine any two or more of the references. Even if the references are improperly combined and the three instances of teaching away are incorrectly ignored, however, the combined references still lack the elements of the pending claims and thus cannot render those claims obvious. Withdrawal of the 35 U.S.C. 103 rejections is therefore respectfully requested.

Conclusion

In view of the arguments presented herein, Applicants believe that all of the pending claims are in condition for allowance and respectfully request that the Examiner withdraw all outstanding rejections and pass this application to issue. The Examiner is encouraged to contact the undersigned at the phone number provided if she believes that such contact will expedite allowance of the claims.

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Very Truly Yours



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